

REMARKS

Applicants have the following response to the rejections in the Office Action.

Applicants are canceling Claims 47-52, without prejudice or disclaimer.

Claim Rejections - 35 USC §103

In the Office Action, the Examiner has the following rejections under 35 USC §103:

1. Claims 1, 13, 31, 47, 51 and 59-60 as being unpatentable over Hiraga et al. (US 6,139,321) in view of Harrah et al. (US 4,405,487) and Matsuura et al. (US 6,001,413) and Nowobilski (US5,328,336).
2. Claims 2 and 14 as being unpatentable over Hiraga et al., Harrah et al. and Matsuura et al. and Nowobilski and further in view of Begin et al. (US 5,310,410).
3. Claims 3 and 15 as being unpatentable over Hiraga et al., Harrah et al. and Matsuura et al. and Nowobilski and further in view of Kakei et al. (US 3,931,789).
4. Claims 4, 34 and 38 as being unpatentable over Hiraga et al. in view of Harrah et al., Matsuura et al. and Nowobilski in view of Conte (US 6,149,392).
5. Claim 5 as being unpatentable over Hiraga et al., Harrah et al., Matsuura et al. and Conte and Nowobilski and further in view of Begin et al.
6. Claim 6 as being unpatentable over Hiraga et al., Harrah et al., Matsuura et al. and Conte and further in view of Kakei et al.
7. Claims 7-8, 16-17, 37, 49 and 52 as being unpatentable over Hiraga et al. in view of Harrah et al., Matsuura et al. and in view of Begin et al. and Nowobilski.
8. Claims 9 and 18 as being unpatentable over Hiraga et al., Harrah et al., Matsuura et al. and Begin et al. and Nowobilski and further in view of Kakei et al.
9. Claims 10, 11, 40 and 50 as being unpatentable over Hiraga et al. in view of Harrah et al., Matsuura et al. in view of Begin et al. and in view of Conte and Nowobilski.
10. Claim 12 as being unpatentable over Hiraga et al., Harrah et al., Matsuura et al., Begin et al. and Conte and Nowobilski and further in view of Kakei et al.
11. Claims 32-33 and 61-62 as being unpatentable over Hiraga, Harrah, and Matsuura et al. and Nowobilski and further in view of Zheng (US 6,124,215).

12. Claims 35 and 36 as being unpatentable over Hiraga, Harrah, Matsuura et al. and Conte and Nowobilski and further in view of Zheng.
13. Claims 38-39 and 45-46 as being unpatentable over Hiraga, Harrah, Matsuura et al. and Begin and Nowobilski and further in view of Zheng.
14. Claims 41 and 42 as being unpatentable over Hiraga, Harrah, Matsuura et al., Begin and Conte and Nowobilski and further in view of Zheng.
15. Claims 43 and 44 as being unpatentable over Hiraga, Harrah, and Matsuura et al. and Nowobilski and further in view of Zheng.
16. Claims 53 and 57 as being unpatentable over Hiraga et al., Harrah et al. and Matsuura et al. and Nowobilski and further in view of Walter (U.S. 4,118,542).
17. Claim 54 as being unpatentable over Hiraga et al., Harrah et al., Matsuura et al. and Conte and Nowobilski and further in view of Walter.
18. Claims 55 and 58 as being unpatentable over Hiraga et al., Harrah et al., Matsuura et al. and Bergin et al. and Nowobilski and further in view of Walter.
19. Claim 56 as being unpatentable over Hiraga et al., Harrah et al., Matsuura et al., Bergin et al., Conte and Nowobilski and further in view of Walter.

Each of these rejections is respectfully traversed.

Each of the rejections relies upon a combination of Hiraga, Harrah, Matsuura and Nowobilski (and other references as deemed necessary by the Examiner, such as for example, Conte). While Applicants traverse these rejections, in order to advance the prosecution of this application and to clarify the claimed invention, Applicants are amending independent Claim 1 to recite the features of “an oxidization furnace connected to said liquid phase film deposition chamber through a piping,” “wherein said oxidization furnace is provided with a second mechanism for oxidizing an element belonging to Group 1 or 2 of the periodic table,” and “wherein said oxidization furnace includes a third mechanism for heating said element belonging to Group 1 or 2 of the periodic table.” Independent Claims 4, 7, 10, 13, 16 and 59 have been amended in a similar way. Dependent Claims 53, 54, 57 and 58 have been amended to be consistent with the

independent claims. These amended claimed features are supported by, for example, Figs. 3A to 3C. These features are not disclosed or suggested in the cited references.

For example, in the Office Action, the Examiner admits that neither Hiraga, Harrah, nor Matsuura (and presumably not Nowobilski) teach an oxidizing mechanism provided by a piping. The Examiner cites Conte and in particular, Figs. 5-7 and col. 5, lines 51-65 in Conte and seems to be relying upon the getter pump 10 therein. The getter pump 10 in Conte, however, appears to be merely a pump for evacuating and is not an oxidation furnace which includes the claimed second and third mechanisms.

Further, even if the getter pump 10 of Conte corresponds to an oxidation furnace (which Applicants do not admit), there is no reason or motivation for one skilled in the art to combine the claimed feature of (1) an oxidization furnace connected to said liquid phase film deposition chamber through a piping, with the claimed features of (2) wherein said oxidization furnace is provided with a second mechanism for oxidizing an element belonging to Group 1 or 2 of the periodic table and (3) wherein said oxidization furnace includes a third mechanism for heating said element belonging to Group 1 or 2 of the periodic table in Hiraga (which has multiple chambers) + Harrah (which allegedly has an element belonging to Group 2 for removing oxygen) + Matsuura (which is allegedly for strengthening the combination of Hiraga and Nowobilski) + Conte (pump) + Walter (heater). The only reasonable way for one skilled in the art to make this specific combination of references, and picking and choosing isolated elements in the references to arrive at the claimed invention, is via improper hindsight reconstruction. Only through the use of hindsight reconstruction using the claims as a blueprint could one skilled in the art arrive at the claimed apparatus. As the U.S. Supreme Court warned in KSR International Co. v. Teleflex Inc., 127 S.

Ct. 1727, 1742 (2007), “[a] fact finder should be aware, of course, of the distortion caused by hindsight bias and must be cautious of arguments reliant upon *ex post* reasoning.”

Further, as explained in the specification of the present application, the claimed features are advantageous. “In this embodiment, the oxygen gettering agent 306 is oxidized (burnt) within the oxidation furnace 302. Oxygen to be consumed at this point is supplied from the liquid phase film deposition chamber 301 through the piping 303, thereby reducing the oxygen concentration in the liquid phase deposition film chamber 301. The film deposition apparatus according to this embodiment is fundamentally different from the film deposition apparatus of Fig. 1 in that a heat source does not need to be placed near the film deposition apparatus of this embodiment. Management is easier if the heat source is apart from the apparatus of this embodiment, for the high molecular type organic EL material to be deposited in the liquid phase film deposition chamber 301 is dissolved into an organic solvent before being applied.” See page 14, lines 11-20 in the specification.

Therefore, even if it were proper to combine the cited references, such a combination still would not disclose or suggest the claimed invention. Further, the combination of references is improper as it is based on improper hindsight reconstruction.

Accordingly, independent Claims 1, 4, 7, 10, 13, 16 and 59 and those claims dependent thereon are patentable over these references, and it is respectfully requested that all the §103 rejections be withdrawn.

Conclusion

It is respectfully submitted that the present application is in condition for allowance, and should be allowed.

If any fee is due for this amendment, please charge our deposit account 50/1039.

Favorable reconsideration is earnestly solicited.

Respectfully submitted,

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